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# Writing Interventions for Students with Specific Learning Disabilities

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WRITING INTERVENTIONS FOR STUDENTS

WITH SPECIFIC LEARNING DISABILITIES

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A Thesis

Presented to the

Faculty of

California State University,

San Bernardino

————————————————

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

in

Special Education

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by

Phillip Michael Daniel Rose

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ABSTRACT

Only 27% of U.S. eighth graders are at or above grade level proficiency in writing (National Center for Education Statistics, 2012). Students with specific learning disabilities frequently exhibit skill deficits in planning, organizing, and writing conventions, and show inadequate awareness to write strategically (Troia, 2006). The purpose of this study is to examine evidence-based writing interventions aimed at enhancing the writing skills of students with specific learning disabilities and then to indicate which interventions were proven to be effective. The results of a variety of studies of writing intervention strategies have been reviewed. Specific instructional strategies that were successful in this study were, direct instruction, motivational interventions, and self-regulated strategies. These instructional strategies/writing interventions enhanced various components of written expression for students with SLDs. A total of 15 studies that implemented a writing intervention for school-aged students with SLD were reviewed. Direct instruction, motivational interventions, and self-regulation strategies improved various components of written expression for students with SLDs.

*Keywords:* writing interventions, specific learning disability, process writing approach, motivation, cognitive strategies, differentiated writing instruction, self-regulation

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CHAPTER ONE

INTRODUCTION

Studies have found that students with learning disabilities at all grade levels experience difficulties with written expression (Deatline-Buchman & Jitendra, 2006). Writing is an essential component of learning. In regard to writing, students with SLDs frequently exhibit problems with methodical planning, creating and structuring text, revising their writing, and spelling, and self-regulation (Evmenova et al., 2016). This study addresses two overarching problems. One problem that all teachers, who work with students with SLDs face, is understanding ways in which the disability impacts students' writing performance. Another problem for teachers is selecting effective writing interventions to implement for students with SLDs in order to enable them to develop their writing skills.

The Problem

Only 27% of U.S. eighth graders are at or above grade level proficiency in writing (National Center for Education Statistics, 2012). This fact should be concerning and leads one to wonder if there is a larger writing problem in the educational system as a whole.

Zimmerman and Risemberg (1997) provided an account of the traditional three step writing process of *prewriting*, *draft*, and *rewriting*. The authors

continued to clarify that writing is more than just a sequence but also involves careful thinking steps resulting in a written composition.

As of 2015, 42 states have adopted the Common Core State Standards. Presently, teachers use these standards as guidelines for academic instruction. ("Common core state standards initiative," 2019). As discussed by Graham and Harris (2013), per CCSS 87% of students in public education are expected to learn how to proficiently write in four areas "Text Types and Purposes," "Production and Distribution of Writing," "Research to Build and Present Knowledge," and "Range of Writing". Their study makes recommendations for teachers working with students with SLDs. These recommendations were created so that students with SLDs can meet the Common Core standards in writing. Though there is no one solution to guarantee success in the common core writing standards, they do offer four recommendations: "increase how much teachers know about writing and writing development; develop a writing environment where students with LD can thrive; implement evidence-based writing practices for all students in the general classroom; and implement evidence-based writing practices that have been shown to work with students with LD" (Graham & Harris, 2013, p.10). These recommendations are consistent with Every Student Succeeds Act of 2015. ESSA specifically supports innovations that are evidence-based, as well as, location-based, which ought to be designed by local leaders and educators ("U.S. Department of Education," 2019).

A student with a SLD, who has dyslexia can experience writing difficulties, for example, spelling errors, poor penmanship, limited vocabulary, lack of ideas, and/or disorganization (Hebert, Kearns, Baker Hayes, Bazis, & Cooper, 2018). Students with SLDs frequently exhibit skill deficits in planning, organizing, writing conventions, and show inadequate awareness to write strategically (Troia, 2006). Written expression is considered both an intellectual process and an analytic activity (Tang, 2016).

As indicated by De Smedt et al. (2018), to improve students' writing competency and self-regulation for writing, teachers should ensure that their students learn essential cognitive strategies and self-regulation strategies to support written expression. Graham and Harris (2013) discussed the importance of motivation and writing. Students with SLDs often have motivational difficulties, however motivation in regard to writing is not in the Common Core State Standards (CCSS). The authors stressed that motivation is central to writing as a necessary component for staying on-task and perseverance. Motivation is related to one's sense of adequacy and many students with SLDs feel inadequate or insecure about their writing skills (Graham & Harris, 2013, p. 31). Graham and Harris (2013) recalled the work of Hayes (1996) which purported that developing writing requires three cognitive procedures. These three cognitive procedures are "text interpretation, reflection, and text production.".

<u>The Purpose of The Study</u>

The purpose of this study is to examine evidence-based writing interventions aimed at enhancing the writing skills of students with specific learning disabilities and then to indicate which instructional interventions were proven to be effective.

The following research question was formulated: Which evidence-based writing interventions can educators implement to enhance the writing skills of students with SLDs?

The convention of writing is conceptualized in a number of ways. There is not one consensus among researchers of the definition of writing skills (Yi, 2009). Malik and ud Din (2019) stated that writing is a mode of communication and an instrument for thinking and for education. The concept and definition of writing skills for this study is a hybrid of several researchers' definitions as there are differences yet also share common ground. According to Garcia-Sanchez and Fidalgo-Redondo (2006), writing skills are a combination of a student's self-efficacy, creativity, and word choice, which is presented in a manner that is comprehendible, including proper spelling, and punctuation skills. McCurdy, Skinner, Watson, and Shriver (2008) asserted that writing skills include a myriad of skills; such as, fluency and quality of producing text, origination of ideas, word choice, proper grammar and punctuation, correct spelling, planning, translation, evaluation, and revision. As conveyed by Unzueta and Barbetta (2012), writing skills are compositions that sufficiently express one's thinking. Walker, Shippen,

Alberto, Houchins, and Cihak (2005) stated that writing skills include complicated metacognitive skills; one's prior information, simple skills, approaches, and ability to coordinate multiple processes.

Perhaps one of the most compelling definitions is by Graham (1997) who asserted that writing skills are comprised of four domains: "(1) knowledge of writing and writing topics, (2) skills for producing and crafting text, (3) processes for energizing and motivating participants to write with enthusiasm, and (4) directing thoughts and actions through strategies to achieve writing goals" (Walker et al., 2005, p. 175).

This study affirms established findings in educational research about students with specific learning disabilities (SLDs) in regard to writing. Briefly discussed are the writing areas within the Common Core State Standards (CCSS), ways in which students with SLDs struggle with writing, and writing interventions for students with SLDs.

It was the intent of this author that this study be of value to the educational field and that interventions and strategies asserted are taken to heart by teachers so that students with SLDs may benefit and become as skillful in writing as they can. This study explored the concepts of motivation or self-regulation and cognitive strategies with regard to writing. Thus, much of the information presented was from literature focusing on motivation or self-regulation interventions, and cognitive strategies to support special education students with their writing achievement.

CHAPTER TWO

LITERATURE REVIEW

Challenges of Students with SLDs

McCurdy et al. (2008) stated that students with SLDs struggle with vocabulary choice, length of composition, and basic mechanics. However, there are other elements that students with SLDs struggle with as well. Deatline-Buchman and Jitendra (2006) asserted that students with SLDs specifically struggle with the process of writing including structure and organization. Students' writing samples exhibit a lack of length, few details, and lose sight of the reader.

As maintained by Grünke (2019), students with SLDs have "failed to develop the knowledge, skill, will, and self-regulatory skills to be successful in key subject areas." As a result, students with SLDs often struggle with assignment completion. In the opinion of Garcia and de Caso (2004), students with SLDs experience frustration and frequently lack thinking steps for the writing process. Furthermore, students need to learn additional strategies to improve motivation. In comparison to the general education student population, students with SLDs have a tendency to have a decreased self-efficacy and appear to be unmotivated. Garcia and de Caso (2004) claim that with respect to writing, in order to accommodate for decreased self-efficacy and low motivation it is critical to teach students with SLDs self-regulation strategies and motivational strategies.

<u>Traditional Process Writing Approach</u>

Studies have confirmed the effectiveness of using the traditional "process writing approach" (PWA) for developing writing skills (Kumar & Sultana, 2016). Writing involves multiple stages: exploratory writing, drafting, and revision; some point along this sequence may include an essay sketch, which is looser and more flexible than an outline (Comley et al., 2013, p. 35).

Instructional Strategies to Support Writing

This section provides information on interventions to enhance student motivation and self-efficacy in writing. Also, discussed in this section are cognitive strategies to support SLDs writing process, along with further research on direct instruction and explicit instruction.

<u>Cognitive Strategies</u>

As indicated in De Smedt et al. (2018) cognitive strategies are "rule-governed methods for planning (i.e., referring to generating and organizing ideas), translating (i.e., referring to text generation and transcription), and reviewing or revising (i.e., referring to the process of rewriting by detecting and repairing problems in the text)."

According to Zimmerman and Risemberg (1997) adept writing involves three types of cognitive strategies: "environmental, behavioral, and covert or personal." Environmental strategies may include selecting a distraction-free

location to write in or enlisting the assistance of tutors. Behavioral strategies may include rewarding one's self by going to the movies after a productive writing session or the act of checking one's progress or proofreading aloud. Covert or personal strategies may include setting alarms, scheduling-in time to write, and having personal benchmarks to reach within timeframes.

Motivation. De Smedt et al. (2018) mentioned that motivation is needed to set aside time for developing ideas, putting in energy to write, re-rewriting, and dedicating oneself to the task. The authors also asserted that students' self-doubt can decrease motivation.

Zimmerman and Risemberg (1997) recalled the work of Bandura (1986) on social cognitive theory and writing. They explained that the act of writing requires a certain level of contending with both monitoring one's self and with one's sense of academic adequacy. The authors describe this back-and-forth, self-regulation process between "personal," "behavioral," and "environmental" is known as a "feedback loop."

Interventions to Support Motivation

Rosário et al. (2017) discussed three interventions to increase motivation (a) make writing a pleasurable activity for students; (b) base writing assignments around particular subjects that students like; (c) have students write more often in a specific style. The authors also suggested that using weekly journals increases motivation and improves the writing quality of compositions. Weekly-journals are motivating to students when they are used as a free-write activity with less rules, and it supports ownership as they write independently. As was discussed by Ewoldt and Morgan (2017) color-coded graphic organizers assist students with organizing ideas, structuring text, and developing their compositions. The use of color in graphic organizers have shown to increase self-efficacy and motivation in students with SLDs.

Cognitive Strategies

According to Zimmerman and Risemberg (1997), cognitive strategies can be simple but useful, such as creating an outline for an essay or using a spell checker or grammar checker (p. 82).

De Smedt et al. (2018) stated that students need to know how to "prewrite," which is sorting out preliminary ideas, thoughts, and forming those ideas into words and sentences. As well, students benefit from learning how to proofread and revise their work.

Hebert et al. (2018) recommended three specific cognitive strategies to support writing, *sentence combining*, *text structure instruction*, and *self-regulated*

*strategy instruction*. Sentence combining is teaching students how to combine shorter sentences to create one intricate sentence. Self-regulated strategy instruction includes teaching students techniques, such as, self-regulation skills, goal setting, self-speech, and self-monitoring. Text structure instruction is a strategy in which students learn to use five writing configurations, description, compare/contrast, sequence, cause/effect, and problem/solution.

       Direct Instruction. As indicated by McCurdy et al. (2008) direct instruction practices are research-proven to improve writing skills include "describing, modeling, demonstrating, prompting, and providing corrective feedback." Direct instruction can be thought of as a teacher-led learning activity. As reported by Manfred, McLaughlin, Derby, and Everson (2015), two direct instruction techniques shown to be highly effective for students with SLDs are error correction and distributed practice. Furthermore, within these approaches are particular strategies; for example, *cover*, *copy*, and *compare* (CCC). The CCC approach is useful for learning activities requiring students to remember and recognize information and increase fluency of skills. For example, *error correction* as described in the study by Manfred et al. (2015) to improve spelling involves the following steps: (a) student looks at the educational item (e.g., a new vocabulary word); (b) teacher covers the educational item; (c) student responds (e.g., attempts to spell the new vocabulary word); (d) teacher uncovers the educational item; (e) student compares their answer to the educational item (p. 6). Moreover, direct instruction as discussed by Li (2007) indicated that the

intervention in their study, *story mapping*, was only beneficial when the intervention was taught with the use of "direct instruction."

Explicit Instruction. Viel-Ruma, Houchins and Fredrick (2007) stated that students with SLDs require additional explicit instruction than typical students. Deatline-Buchman and Jitendra (2006) commented in their study that explicit instruction in writing is essential for students with learning disabilities. The authors further point out that systematic step-by-step or *explicit instruction* is necessary to adequately teach students who have SLD self-regulation strategies for writing. Particularly, self-regulation skills are needed for planning and/or dictation. Precise steps for writing a composition; for example, an argumentative essay, includes many components. Teaching these components in broken down procedures to students with SLDs allows them to develop the composition's purpose, write with the reader in mind, be able to create a compelling and interesting beginning and ending to the paper, and present multiple viewpoints.

According to Walker et al. (2005) students with SLDs experience challenges with organization, procedures, and motivation. Explicit teaching may be described as being a manner of instruction that is facilitated by the teacher and is procedure oriented including rules. Both *explicit* and *direct* are, in essence, teacher-directed and procedure and rule-based. Other elements of direct/explicit instruction include teaching in a small group setting (model), choral response (lead), and the teacher making instant corrections according to the rules for

correcting (test). Furthermore, the purpose of these three components are to support the student's proficiency of the skills being taught.

## Conclusion

Writing in an effective and proficient manner involves the writer to search for solutions and to utilize mental steps. We, as teachers, have to continue looking for new ways to support academic progress. Enhancing student motivation and helping students become better thinkers is what I feel quality education and learning is all about. Writing is more than just using proper grammar, and correct spelling and punctuation. Writing is a necessary skill that students with SLDs must conquer so that they can enjoy the ability of expressing themselves on paper.

CHAPTER THREE

METHOD

Specific Criteria for Selection

The studies that were included in this review met specific criteria for selection. The studies had to meet the following inclusion criteria: (a) include school-aged students identified as having a learning disability; (b) implement writing interventions or instructional strategies; (c) use experimental, quasi-experimental, or single-subject design; (d) be published in peer-reviewed academic journals; and (e) be written in English.

Search Strategies

A comprehensive search of literature was conducted. First, a computer database search of relevant studies of peer-reviewed journal articles on interventions for writing problems using EBSCOhost, ERIC, and PsycINFO was completed. The following descriptors were used in the search, *learning disabilities*, *writing*, and *intervention*.

The initial search produced 34 studies. The abstracts of the initial 34 studies were reviewed to determine whether they met the inclusion criteria for this study, as well as, to ensure that the studies focused on writing interventions for students with learning disabilities. Another aim in reviewing the studies was to make certain the studies measured the outcome of the writing intervention using an experimental design research model.

This search parameter for this study required peer-reviewed academic journals within the publication date of 2000 to 2019 in order to present the most current evidence-based findings. The review of the abstracts resulted in 15 studies that met the inclusion criteria and were published after the year 2000.

Coding of Study Features. The finalized 15 studies were coded with the following features: (a) participants' characteristics (age or grade level), (b) intervention setting, (c) experimental design, (d) intervention, (e) measures of outcomes, (f) instructor, (g) intervention length, and (h) effectiveness. Table 1. shows the summary of 15 studies based on the coding features.

Writing Interventions. The table below contains 15 studies that were grouped in categories. The categories are (a) Explicit/Direct Instruction; (b) Motivation; (c) Self-Regulation. Additionally, the table includes several columns showing the characteristics and details about each study. The columns in the table are (a) participants; (b) setting; (c) experimental design; (d) intervention; (e) outcome measures; (f) instructor; (g) intervention length; (h) effectiveness. All of the studies in the table represent writing interventions that were implemented on school-aged students with SLDs.

Multiple interventions were presented to address each of the main intervention categories. A partial list of the skill areas addressed in the interventions includes, planning, spelling, expressive writing, narrative writing, persuasive writing, motivation, self-regulation, words used, sentence structure, flow of ideas, and cohesive writing to name a few.

Table 1. Writing interventions for students with learning disabilities

| Study | Participants | Setting | Experimental design | Intervention | Outcome measures | Instructor | Intervention length | Effectiveness |
|---|---|---|---|---|---|---|---|---|
| Explicit/Direct Instruction | | | | | | | | |
| Deatline-Buchman & Jitendra (2006) | Five fourth-grade students with learning disabilities | Urban elementary school in the northeastern United States | Subject pretest-posttest comparison design | Planning and writing intervention in improving the argumentative writing performance. Instruction on collaboratively planning and revising their essays and independently write their essays | Writing essay pretest derived from the Pennsylvania System of School Assessment of Education | Classroom teacher | Three 45-min sessions a week for six weeks followed by two 45-min sessions a week for two weeks to fade instruction | Improvements in students' written and oral protocols from pretest to posttest on all measures |
| Li (2007) | Four 4th-and/or 5th-grade students with LD | Two suburban elementary schools in the southwest United States | A multiple-probe single-case | Direct instruction<br><br>Story map and story map questions to improve the story writing fluency and word usage diversity | Probe trials that are operationally identical to preintervention baseline trials are conducted intermittently on behaviors to be trained | The researcher: Daqi Li | Four weeks | Three of the four students improved their writing fluency; In diversity of word usage, no considerable changes were found in the students' writing performance. |

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|---|---|---|---|---|---|---|---|---|
| Manfred, McLaughlin, Derby, & Everson (2015) | Three students with learning disabilities | Public elementary school Resource classroom for 60 to 90 minutes a day | A modified multiple baseline and ABAB reversal design | Cover copy compare: Spelling and written composition intervention | Baseline data from the participants' earlier spelling tests | Master teacher, instructional assistant, and the first author) providing instruction | 12 weeks during the regular school year | The results of this study demonstrate that the CCC method of spelling practice is an effective way to teach these students with learning disabilities |
| McCurdy, Skinner, Watson, & Shriver, (2008) | 17 Students with from 9th grade special education classrooms | Resource Classroom  Urban middle school in the central United States | Multiple-baseline across-tasks designs | A multi-component Intervention.  Direct instruction | Baseline assessments of writing ability  Three 3-mins writing probes | Primary Investigator Merilee McCurdy | One semester | Evidence that the CWP intervention enhanced writing performance across targeted skills |
| Saddler, Asaro & Behforooz (2008) | Four young students with LD | Inner-city elementary school in the northeastern United States | Multiple-baseline-across subjects design with multiple probes | Direct instruction  Peer-Assisted Sentence-Combining | Writing performance was measured over time to establish a baseline | A train ed graduate student served as the instructor | Each Sessions 35 minutes three times per week, for 18 lessons. (6 weeks) | The intervention was very effective in increasing sentence-combining ability |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Unzueta & Barbetta (2012) | Four students with specific learning disabilities | Seventh and eighth grade middle school. Regular cotaught classroom setting with a special education teacher present for language arts | A single-subject multiple baseline design across subjects was employed using four participants. | Direct instruction  Computer graphic organizers on the persuasive composition writing skills | Baseline assessment on the major components of persuasive composition | The Researcher: Caridad H. Unzueta | The study sessions were held four days a week after school from 3:15 p.m. to 4:15 p.m. for 12 weeks | The results of this study demonstrated that the use of a computer graphic organizer had positive effects on the participants' persuasive writing compositions |
| Viel-Ruma, Houchins, & Fredrick (2007) | One special education teacher, two 10th-grade students and one 12th-grade student | Resource Classroom | An alternating treatment design | Error self-correction procedure | Pretested over the 16 words that they would be studying that week | Special Education teacher | A 6-week period with maintenance checks conducted 4 and 8 weeks after the termination of instruction | High school students with deficits specifically in written expression also can use error self-correction to improve their spelling performance |
| Walker, Shippen, Alberto, Houchins, & Cihak (2005) | 3 high school students with LD | Public High School large metropolitan area of southeastern United states | Multiple probe design across participants | Direct Instruction writing program, Expressive Writing, for high school students with learning disabilities | Curriculum-based measure of Correct Word Sequences | Barbara Walker | 7 weeks for the intervention and an additional six weeks for the maintenance probes | Results indicated that the Expressive Writing program improved the writing skills of the students in this study |

| Motivational | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Garcia & de Caso (2004) | 127 fifth- and sixth- grade primary students with low achievement and/or learning disabilities, ranging in age between 10 and 12 years | Small groups (2-4) standard school setting | Design consisting of experimental and control groups and pre-/posttest<br><br>A multivariate analysis, 2 x 2 with repeated measures (factorial 2x2 design) | Writing motivation and planning strategies<br><br>Motivational training focused on multiple attributes: value and functional character, standards of performance, expectations, beliefs, self-efficacy, self-esteem and writing-related factors | Writing performance and motivational factors were assessed using a battery of tests | 32 teachers who were in their final year of a master's program in psychology and pedagogy | March and May, 2002 | Statistically significant changes in the quality of texts and in attitudes the second factor of motivation. For the other motivational measures, in general, the results were not statistically significant |
| Grünke (2019) | Four students (ages 12-14yrs) with learning disabilities | School for students with moderate general learning disabilities: Resource room | ABA reversal design | Motivational Intervention: Writing longer stories through explicit timing, immediate feedback through self-scoring and displaying high scores | Writing performance was assessed using a general-outcome measure of overall writing ability | Special-education graduate college student | Intervention length 15 to 30 minutes every day for one week | Motivational system has the potential to help students with learning disabilities to write considerably longer stories than they would otherwise |

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| Self-Regulatory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Evmenova, Regan, Boykin, Good, Hughes, MacVittie,Sacco, Ahn, & Chirinos (2016) | Ten seventh- and eighth- grade students with LD, ED and BD, ADHD, and ASD participated in the study. | Low performing middle school in the Mid-Atlantic in special education classroom, computer lab, or an open Pod area | A multiple-baseline single-subject case study across three groups of students | Effects of a computer-based graphic organizer (CBGO) with embedded self-regulated learning strategies | Multiple baseline design: persuasive writing assessment | Two faculty members and five doctoral students | Four 50-min lessons were designed to teach the CBGO intervention with embedded self-regulated learning strategies | Overall results on the use of the CBGO with embedded self-regulated learning strategies are promising |
| Garcia-Sanchez & Fidalgo-Redondo (2006) | 121 fifth and sixth grade students with LD | Small groups of 6-8 from different classrooms | 2 x 3 Factorial design of repeated text-based measures in written products and 2 x 3 multivariate analysis of variance with repeated measures in student texts | Social cognitive model of sequential skill acquisition and the self-regulated strategy development model for writing. | A writing self-regulation assessment and a proficiency assessment writing related to composition writing. | Four educational psychologists, who were specifically trained in the psychology of writing and the cognitive strategy model used. | Experimental students were exposed to the intervention program three times a week. 25 sessions in all, lasting about 50 minutes each | Both interventions, the SRSD based and the SCM-based models, enhanced the global quality of written products |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hebert, Kearns, Baker Hayes, Bazis, & Cooper (2018) | One student (a pseudonym) is a 10-year-old fourth grader | Elementary school classroom | Randomization or single-case methods | Self-regulated<br><br>Remedial and compensatory intervention strategies in spelling | Instructional components in studies with positive effects on spelling | Classroom teacher | Meta-analytic efforts over the past 15 years | A Multicomponent program is the most effective for students with Dyslexia |
| Lienemann & Reid (2008) | Four, 4th- and 5th-grade students with attention deficit hyperactivity disorder | Elementary school classroom | Multiple baseline across participants with multiple probes during baseline was used | Self-Regulated Strategy Development model | Each student was administered 3 writing examines to establish a baseline prior to receiving intervention | Torri Ortiz Lieneman | Individualized instruction 20 to 30 min, 4 days a week for 2 to 3 weeks | The results of this study suggest that SRSD instruction can be highly effective in improving the essay composition skills of students with ADHD |
| McConnel, Little, & Martin (2015) | Four High School Students | High School classroom: Small special education resources room | Multiple probe design across behaviors | Proper use and construction of paragraphs. self-regulated strategy development (SRSD) a brief intervention | Participants wrote two essays during baseline | Volunteer teacher and a paraprofessional | 10 instructional sessions of the intervention | Students demonstrated increased paragraph writing skills, essay organization and essay length, while targeting post-secondary goals and transition planning in their writing |

CHAPTER FOUR

RESULTS

Table 1 shows a variety of writing interventions for students with specific

learning disabilities (SLDs). The 15 studies that were analyzed were grouped by

instructional strategies: (a) Explicit Instruction; (b) Motivation; and (c) Self-

regulation. Each one of these interventions presented various measures of

effectiveness. The results of each study varied depending on the writing

intervention implemented. All of the interventions were implemented on students

with a SLD attending a kindergarten through 12th grade academic institution.

Writing Interventions

The results of a variety of studies of writing intervention strategies have

been reviewed. Specific instructional strategies that were successful in this study

were, direct instruction, motivational interventions, and self-regulated strategies.

These instructional strategies/writing interventions were shown to improve

various components of written expression for students with SLDs, which was

further discussed in this section.

Explicit and Direct Instruction

Deatline-Buchman and Jitendra (2006) used a *planning intervention* for

compositions to enhance argumentative essay writing skills of students with

SLDs. The instruction involved collaborative planning and revision of students'

essays. Students' success was demonstrated in the baseline testing procedure and posttest data on verbal and writing skills. The pre and post procedure evaluated word count, planning, writing fluency, and the quality, of the composition. However, a limitation of the study is that, "only three of the five students made gains related to writing clarity and cogency."

When working with students with SLDs, Viel-Ruma, Houchins and Fredrick (2007) found that explicit instruction in self-correction and spelling had a beneficial effect on student's overall writing quality. Explicit instruction was also shown to increase the writing skills of typical students (i.e., students without SLDs). Their findings attest that if a student improves in spelling, the student's overall writing quality will improve. Moreover, students that exhibit poor spelling frequently have challenges with higher level writing skills, such as "composing and developing stylistic features." (Viel-Ruma, Houchins, & Fredrick, 2007, p. 291).

Similarly, Manfred, McLaughlin, Derby, and Everson (2015) implemented a spelling intervention with three students with SLDs. They affirmed that when students with SLDs receive a spelling intervention their writing abilities greatly improve. The intervention was called, *cover*, *copy*, and *compare* (CCC). CCC is a multistep strategy to remediate poor spelling. All of the students who received the CCC spelling intervention showed positive results, which indicated that improving spelling with CCC demonstrated overall improvement with written expression.

Walker et al. (2005) taught expressive writing to students through direct and explicit instruction. Due to the higher-level cognitive processes that go along with expressive writing, students with SLDs may experience difficulties with, goal setting, creating suitable content, structuring their essays, and evaluating and revising their products. Walker et al. (2005) supports direct instruction teaching strategies, as well as, intervention programs for teachers who work with students with SLDs who are experiencing challenges in expressive writing.

McCurdy and colleagues (2008) revealed that when progression occurred using a Comprehensive Writing Program (CWP), the student's acquired skills often regressed without continued practice. Writing skills gains were made using the CWP but the *targeted* skills decreased without maintenance (i.e., continued practice). The CWP was implemented on middle school students with SLDs. This multicomponent intervention included direct instruction and other instructional strategies (e.g., assignment choice, increased practice, group rewards, and individual feedback. CWP was found to efficacious across *Targeted Skills* for students SLDs.

The speed at which students write (i.e., fluency), as well as, enhanced vocabulary can be observed when implementing the intervention known as, *Story Mapping*" (Li, 2007). It is essential to model for students how to story map. This strategy is particularly useful for supporting students with SLDs in narrative writing. Story mapping provides guidance and structure with creating the elements that must be incorporated into the story. The elements include

components, such as "characters, settings, goals, problems, solutions, and outcomes".

In order to support students with SLDs with writing stories, Saddler, Asaro, and Behforooz, (2008) instructed students on how to use a *Peer-editor Checklist* for the process of revising their writings. This study focused on increasing students' ability to combine sentences to create more developed sentences. Students were able to utilize the checklist and as a result generate more complex and developed sentences make as well as make revision recommendations to peers. The *Peer-editor Checklist* gave the students the experience of critiquing one another's writing and the value of the revision process.

Unzueta and Barbetta (2012) showed a manner to improve *Persuasive Writing* by using a *Computer Graphic Organizer*. In results, students used more words in total, increased in writing fluency and detail and quality, and showed better grammar and punctuation, although only four students participated.

Motivation. Grünke (2019) incorporated explicit timing, immediate feedback through self-scoring, and a visual display of high scores, with aim of motivating students to increase the length of their writings. As a result of the motivational techniques, each one of the students increased the length of their writing. The students demonstrated more success in their writings; however, the effective of the motivation may decrease if not maintained.

Garcia and de Caso (2004) addressed motivation and cognitive processes with their motivational intervention that concentrated on combining the process of

writing with motivational techniques. Specifically, the study focused on several characteristics of motivational and cognitive process features, such as "value and functional character, standards of performance, expectations, beliefs, self-efficacy, self-esteem and writing related factors". The study consisted of sixty-six fifth and sixth grade students with SLDs. Through this motivational and cognitive processes intervention, students were able to improve their feelings and perspectives about writing as well as improve the overall quality of their compositions in the areas of description, narration and essay."

Self-Regulation. Garcia-Sanchez and Fidalgo-Redondo (2006) implemented social cognitive model of sequential skill acquisition (SCM intervention) and the self-regulated strategy development model (SRSD intervention) for 121 5th and 6th graders with SLD with their writing and revising process. Students who received the SCM and SRSD interventions were able to sustain writing for longer periods of time, stay on task, put forth good effort with planning, and checking their writing for quality and syntax. The instruction to students included, "developing and activating background knowledge, strategy goals and significance, modeling strategy memorization strategy, collaborative practice, and ending with independent performance." The students demonstrated success in improving writing outcomes. However, further research is needed to determine whether the positive effects of the interventions are going to remain over time and whether the students who received the intervention would generalize these self-regulation skills in the future (p. 26).

Lienemann and Reid (2008) found that students with SLDs who have ADHD benefited when they received the self-regulated intervention. The participants of this study greatly increased the length of their compositions. These researchers commented that this intervention may be particularly effective because current research findings suggest that students with ADHD have difficulty with self-regulation. The students in this study were in fourth and fifth grade.

McConnell, Little, and Martin (2015) noted that the students with SLDs in their study did not have the ability to write lengthy compositions in class until this self-regulatory intervention was implemented. The effects of this intervention were that student's essays were longer, had more detail, and had more paragraph elements. At the onset of the study, the participants had underdeveloped self-regulatory skills which impacted their writing composition and assessments. They were taught composition skills in a scaffolded manner. The results indicated that the students increased in paragraph writing skills, essay organization and essay length.

Evmenova and colleagues (2016) stated that often times students with SLDs experience writing challenges. This study included students with other disabilities, such as with emotional and behavioral disorders and autism spectrum disorder (ASD) in addition to students with SLDs including ADHD. Students with SLDs frequently exhibit problems with methodical planning, creating and structuring text, revising their writing, and spelling, and self-

regulation. An effective means to teach these students to self-regulate and develop writing skills is with the use of a computer-based graphic organizer. Through the computer-based graphic organizer intervention the students in the study improved in the amount of words used, sentence structure, flow of ideas, and cohesive writing.

The primary disability that Hebert, Kearns, Baker Hayes, Bazis, and Cooper (2018) addressed in their study was dyslexia. Children with dyslexia tend to "struggle with transcription skills, working memory, and executive functioning." These are the factors that contribute to the "poor spelling and overall low writing quality." Intervention strategies that were in this study were, "spelling using sound-spellings and morphemes and overall quality using text structure, sentence combining, and self-regulated strategy development." The findings of this study were that "remedial and compensatory intervention strategies in spelling, transcription, executive function, and working memory" were effective for students with dyslexia experiencing writing difficulties.

CHAPTER FIVE

Discussion

This study reviewed 15 effective writing interventions that can enhance the writing skills of students with SLDs. Students with SLDs frequently exhibit skill deficits in various aspects of writing (e.g., planning, organizing, and writing conventions) and show inadequate awareness to write strategically. All of the reviewed studies showed an increase in one or more aspects related to writing performance. The next real-world practical step for teachers would be to use the information in this study to guide them in the right direction when seeking additional information about any of the writing interventions for students with SLDs.

It is key to mention that teachers ought to understand their students' baseline of writing skills to understand the writing skill deficits. This way, the proper writing intervention can be selected. Of equal importance, a common element among the interventions agreed upon by a high number of researchers was the use of *direct* or *explicit* instruction. In essence, this means teaching students with teacher-led activities and using a systematic, rules-based, or procedures-based approach. Educational specialists should expect to see positive results if they incorporate these writing interventions in their instructional program to teach writing skills.

Recommendations

Teachers are encouraged to implement the writing interventions with fidelity for the best results. Regardless of the intervention chosen, it is suggested that the intervention time period generally be extended for students with SLDs. Deatline-Buchman and Jitendra (2006) suggested making writing a priority in a teachers' instructional program. Thus, it is recommended that students are provided ample opportunities to receive explicit instruction and to engage in writing tasks at school, daily. McCurdy et al. (2008), recommended teachers provide 10 minutes of direct writing instruction prior to starting a writing session. It is also recommended that teachers increase opportunities to respond, which in essence, are many chances for the student to use the new skill. The more times a student responds with the new skill, the more they are improving their fluency, and it becomes easier, and sustaining the skill over time.

It is recommended that teachers be mindful that aside from mechanics, writing performance involves thinking skills, self-regulation skills, and motivation. Grünke (2019) provided the idea that teachers can improve student motivation by including a "motivation system that consists of explicit timing, self-scoring, and displaying high scores". Also recommended, as noted in Garcia and de Caso (2004), motivation relies on several situational factors. Therefore, teachers should change, accommodate, and create an instructional program based around the specific learning context in order to increase motivation. Unfortunately, even with the use of appropriate interventions, there will still be

obstacles for teachers. To mitigate unforeseen challenges, it is recommended

that teachers provide students with choices, which provides students with a

degree of control over their own educational path. Above all, it is recommended

that the educational environment be positive and encouraging, which will

enhance student participation and involvement (Garcia & de Caso, 2004).

<u>Implications of Writing Instruction</u>

This study is important because the information provided ought to change

the way teachers think about writing instruction. Students with SLDs need

different strategies and varied approaches to develop their writing skills.

Considering that motivation, self-regulation, and self-efficacy play a significant

role in writing achievement, Grünke (2019) suggested that the instructional

program ought to include strategies that support student motivation. Moreover, a

combination of low self-esteem or low self-efficacy, as well as, having writing

achievement deficits, may lead students with SLDs to lower motivation. To

address low motivation, teachers should incorporate strategies that focus on

increasing students' self-esteem and self-efficacy and improving students' sense

of empowerment. Thus, writing instruction ought to include strategies for self-

regulation and increasing students' self-esteem and self-efficacy (Garcia & de

Caso, 2004).

Another implication about writing instruction is that direct instruction and

explicit instruction are fundamentally necessary for students with SLDs (McCurdy

et al., 2008). This means that writing instruction should include lessons that are

led by the teacher and by using a writing instructional style based on concrete procedures and rules (i.e., systematic). Some of the characteristics include "describing, modeling, demonstrating, prompting, and providing corrective feedback" (McCurdy et al., 2008, p.48).

Limitations. This study is limited in that there is more research on this topic available than could be covered. The focus of this paper synthesizes findings from the studies examined. It is important to acknowledge that there are various other evidence-based writing interventions that exist that were not discussed in this study.

Another limitation of this study is that there is a degree of subjectivity as to the selection of the studies included. This author was drawn to the important roles that self-regulation and motivation play in writing performance. There are certainly other viewpoints in the educational literature that focus on different factors involved in writing interventions.

Conclusion. The aim of this study was to investigate how SLDs impact students' writing performance. Additionally, this study set out to discover which evidence-based writing interventions educators can implement in a school setting to enhance the writing skills of students with SLDs. The unique learning styles of students with SLDs negatively impact their performance on writing skills in every possible way as evidenced by the myriad of research findings reviewed in this study. However, students, parents, and teachers should feel optimistic because even though the research is clear that some traits caused by SLDs are major

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barriers to writing achievement for school aged students, there are plenty of writing interventions that have been proven to remove these barriers and mitigate the negative impact of the disability on writing achievement.

In light of the writing interventions and instructional approaches provided and recommended in this study, it is suggested that teachers consider integrating these findings into their instructional program. Direct instruction and explicit instruction are the recommended instructional approaches when implementing writing interventions. This paper clarifies some of the questions that teachers may have with respect to enabling students with SLDs to surmount their writing difficulties. Furthermore, the overarching purpose of this study was to offer classroom teachers writing interventions for students with SLDs.

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